

CLAIMS

1. A method for controlling the execution of multiple tasks in a
2 processing circuit including several modules, comprising the steps of:
4 determining temperature-associated information at various areas of the
processing circuit; and
6 executing the tasks on said plurality of processing modules responsive to
one or more areas exceeding a temperature threshold.

2. The method of claim 1 wherein said determining step comprises
2 the step of monitoring operations executed by said modules.

3. The method of claim 1 wherein said determining step comprises
2 the step of calculating power dissipation information at various locations in said
processing circuit.

4. The method of claim 1 wherein said determining step comprises
2 the step of calculating a current temperature at various locations in said
processing circuit.

5. The method of claim 1 wherein said determining step comprises
2 the steps of:
4 generating a task allocation scenario;
6 estimating temperature-associated information for various locations in the
processing circuit;
6 computing the temperature associated with said activities.

6. The method of claim 5 wherein said step of generating a task
2 allocation scenario comprises the step of receiving a task list describing the tasks
to be executed and a task model describing the tasks.

4 7. The method of claim 6 wherein the task model includes initial area-specific power dissipation estimates for each task.

2 8. A processing circuit including a plurality of processing modules for
executing multiple tasks comprising:
4 circuitry for determining temperature-associated information at various
areas of the processing circuit; and
6 circuitry for executing the tasks on said plurality of processing modules
responsive to said temperature-associated information to prevent problems
associated with one or more areas exceeding a temperature threshold.

2 9. The processing circuit of claim 8 wherein said determining circuitry
comprises circuitry for monitoring operations executed by said processing
modules.

2 10. The processing circuit of claim 8 wherein said determining circuitry
comprises circuitry for calculating power dissipation information at various
locations in said processing circuit.

2 11. The processing circuit of claim 8 wherein said determining circuitry
comprises circuitry for calculating a current temperature at various locations in
said processing circuit.

2 12. The processing circuit of claim 8 wherein said determining circuitry
comprises circuitry for generating a task allocation scenario, estimating
temperature-associated information for various locations in the processing circuit
4 and computing the temperature associated with said activities.

2 13. The processing circuit of claim 12 wherein said circuitry for
generating a task allocation scenario comprises circuitry for receiving a task list
describing the tasks to be executed and a task model describing the tasks.

4 14. The processing circuit of claim 13 wherein the task model includes initial area-specific power dissipation estimates for each task.

2 15. A mobile communications device comprising:
an antenna for receiving and transmitting signals; and
2 receiver/transmitter circuitry coupled to said antenna for sending and
4 receiving audio and data signals, said receiver/transmitter circuitry including a
processing circuit comprising:
6 circuitry for determining temperature-associated information at
various areas of the processing circuit; and
8 circuitry for executing the tasks on said plurality of processing
modules responsive to said temperature-associated information to prevent
10 problems associated with one or more areas exceeding a temperature threshold.